

**STATE OF ILLINOIS**  
**ILLINOIS COMMERCE COMMISSION**

<b>Illinois Power Company</b>	)	
	)	<b>Docket No. 04-0476</b>
<b>Proposed General Increase in</b>	)	
<b>Natural Gas Rates</b>	)	

Direct Testimony and Schedules of

**John W. Mallinckrodt**

On Behalf of

**Illinois Industrial Energy Consumers**

November 5, 2004  
Revised January 21, 2005  
Project 8264



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**Direct Testimony of John W. Mallinckrodt**

1    **Q     PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2    A     John W. Mallinckrodt; Brubaker & Associates, Inc., 723 Gardner Road, Flossmoor, IL  
3           60422.

4    **Q     PLEASE STATE YOUR OCCUPATION.**

5    A     I am a consultant in the field of public utility regulation. I am employed by the firm of  
6           Brubaker & Associates, Inc., energy, economic and regulatory consultants. The firm's  
7           main office is located at 1215 Fern Ridge Parkway, Suite 208, St. Louis, MO 63141.

8    **Q     PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

9    A     This is summarized in Appendix A to my testimony.

10   **Q     ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

11   A     I am appearing on behalf of the Illinois Industrial Energy Consumers (IIEC). The  
12           members of IIEC are large industrial customers who transport natural gas on the  
13           Illinois Power Company (Company or IP) system.

1    **Q     WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

2    A     My testimony will address:

- 3           •   Balancing issues related to daily imbalances and daily cashout of imbalances;
- 4           •   Implementation of pooling and imbalance trading;
- 5           •   Utilization of an optional storage bank for SC 76 customers for balancing;
- 6           •   Level of Unaccounted-for-Gas losses that is currently charged by IP; and
- 7           •   The need to properly reflect the heat content of gas in billing and gas accounting.

8                   Cost of service, cost of unbundled storage option, and various other case

9           issues will be addressed by my colleague, Dr. Alan Rosenberg. The fact that I have

10          not addressed other issues raised by IP's rate filing, such as revenue requirement

11          issues, should not be construed as agreement with the Company's positions.

12   **Q     PLEASE EXPLAIN WHY INDUSTRIAL (SC 76) CUSTOMERS ARE CONCERNED**

13   **WITH IP'S BALANCING AND OTHER TARIFF PROPOSALS IN THIS RATE CASE.**

14   A     IP's proposed changes in its tariff related to cashout of daily imbalances and some of

15          the terms and conditions under which these customers would receive natural gas

16          service, are unreasonable. As I explain in detail below, IP's proposed daily

17          imbalance provisions and cashouts of daily imbalances are neither needed to handle

18          imbalances nor justified by current operations. IP's proposed method of recovering

19          storage costs from SC 76 customers results in costs being charged to these

20          customers that exceed the cost of actually using storage to balance deliveries and

21          would result in SC 76 customers subsidizing other IP customers.

**Q PLEASE SUMMARIZE THE PRINCIPAL POINTS OF YOUR TESTIMONY.**

**A** The principal points of my testimony are summarized below:

1. IP's daily balancing proposal (both the 10% and other tier levels) and the daily cashout of imbalances should be rejected as unreasonable, not necessary or justified, and an overallocation of storage costs to SC 76 customers.
2. IP should instead provide pooling of transportation volumes to allow transportation customers to take advantage of the natural diversity that exists on the system.
3. IP should provide provisions for imbalance trading at the end of the month to alleviate or reduce monthly cashout of imbalances.
4. If daily balancing and cashout is adopted, IP should provide an optional storage banking service to allow SC 76 customers to deal with daily imbalances and monthly imbalances that exist after pooling and imbalance trading. This service should be similar to the storage bank service provided to Rider OT customers and provided by other Ameren affiliated Local Distribution Companies (LDCs) in Illinois to transportation customers.
5. Also, if daily balancing and cashout is adopted, the daily balancing tier levels must be enlarged and cashout penalty levels must be changed.
6. IP should reduce the level of the Unaccounted-for-Gas charge currently applied to transportation and sales volumes as it is excessive. The Unaccounted-for-Gas charge should be set based on the three-year average instead of by the current method.
7. Billing and gas accounting should be based on an MMBtu or heat content basis instead of a volumetric basis.

### **Daily Imbalance Issues**

**Q WHAT ARE YOUR GENERAL CONCERNS WITH THE DAILY BALANCING, DAILY CASHOUT, AND RELATED PROVISIONS?**

**A** I have several general concerns. First, certain aspects of these provisions are unreasonably stringent. Second, IP's inability to provide the customers with usage information that would allow customers to react in a timely manner is a problem. Therefore, IP's daily balancing and daily cashout provisions are unreasonable, and should be rejected by the Commission.

1    **Q     WHY DO YOU CONSIDER ELEMENTS OF IP'S BALANCING AND CASHOUT**  
2       **PROVISIONS TO BE TOO STRINGENT?**

3    A     While a provision for 10% monthly balancing is acceptable, a 10% daily balancing  
4       provision is not acceptable and is too stringent. There is no proof that IP has incurred  
5       any daily balancing problems. Also, IP does not point to any problems with the daily  
6       transportation balances of SC 76 customers. The current situation has been in place  
7       for 10 years and, to the best of my knowledge, during that period IP has never  
8       suggested that there were any daily balancing problems. If customers are causing  
9       daily balancing problems on the system, IP should tailor tariff provisions to address  
10      those specific problems. There is no demonstrated reason why daily balancing  
11      should be implemented. There is no need for daily balancing to control IP's system  
12      or to change transportation customers' behavior.

13   **Q     PLEASE DEFINE THE TERMS "DAILY BALANCING" AND "DAILY CASHOUT"**  
14       **AS YOU USE THOSE TERMS IN THIS TESTIMONY.**

15   A     "Daily Balancing" is the requirement to stay in balance on a daily basis. That is, every  
16      day the transportation customer's nominations equal their use and there is no  
17      difference in the two volumes or no daily imbalance. "Daily Cashout" is the process  
18      whereby the customer must sell back positive imbalances to the utility at some  
19      fraction of that day's gas price or the customer must buy from the utility enough gas  
20      to make up any negative imbalance at some multiple of that day's gas price.

21   **Q     HAVE OTHER ILLINOIS LDCS INCLUDED DAILY BALANCING IN COMBINATION**  
22       **WITH DAILY CASHOUT PROVISIONS IN THEIR TARIFFS?**

23   A     No other Illinois gas utilities have daily balancing and daily cashout of imbalances.  
24      To my knowledge, the Illinois Commerce Commission (Commission) has never

1 approved a request for daily balancing in combination with a daily cashout, so this is  
2 a new issue. Apparently, no other LDC has proposed daily balancing and most  
3 particularly daily cashouts as necessary for their operations.

4 **Q HAVE OTHER STATE COMMISSIONS REJECTED DAILY BALANCING AND**  
5 **DAILY CASHOUT?**

6 A TXU Gas Company recently filed for daily balancing in its rate case before the  
7 Railroad Commission of Texas. Their request was rejected because they could not  
8 provide real-time meter data.<sup>1</sup> However, even TXU did not ask for daily cashouts of  
9 imbalances, only for daily balancing.

10 In Wisconsin, LDCs have daily balancing, but they provide pooling or allow  
11 third-party pools. However, they do not have cashouts of daily imbalances. If daily  
12 imbalance tolerances are not met, they assess scheduling penalties or balancing  
13 service charges that vary with the level of imbalance. They also have monthly  
14 cashouts of end-of-month imbalances.

15 **Q DO INTERSTATE PIPELINES HAVE DAILY BALANCING REQUIREMENTS IN**  
16 **COMBINATION WITH REQUIREMENTS THAT SUCH IMBALANCES BE CASHED**  
17 **OUT ON A DAILY BASIS?**

18 A Interstate pipelines have daily balancing provisions and scheduling penalties, but do  
19 not cash out imbalances on a daily basis. They still cashout imbalances on a monthly  
20 basis, based on monthly tolerances, and after imbalance trading has occurred.

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<sup>1</sup> See Final Order, TXU Gas Company, Texas Railroad Commission Docket No. 9400, Findings of Fact 156A, <http://www.rrc.state.tx.us/divisions/gs/rap/pfds.html>.

**Q WHAT ARE IP'S ARGUMENTS FOR IMPLEMENTING DAILY BALANCING AND CASHOUT PROVISIONS?**

A IP argues that it is proposing these changes to SC 76 to better match the services transporting customers receive with the cost for these services. IP's testimony, Exhibit 8.1, page 4, line 79 to page 6, line 123, states that imbalance criteria and cashouts of daily imbalances would better align natural gas storage services and storage cost allocations.

**Q HOW DO YOU RESPOND TO IP'S ARGUMENTS FOR IMPLEMENTING DAILY BALANCING AND CASHOUT PROVISIONS?**

A The provision for monthly balancing and cashout is a sufficient incentive for transportation customers to stay in balance and to provide the required system control. The monthly cashout of imbalances forces transportation customers to stay in balance over the month. If a customer is out of balance in the beginning of the month, it has to adjust nominations so that it is in balance by the end of the month or it will incur a monthly cashout of its imbalance at the end of the month. Transportation customers try to avoid cashouts of imbalances as they are costly and add to the cost of gas and transportation costs. The monthly balancing and cashout requirements are sufficient incentives for transportation customers to stay in balance and daily balancing provisions are not required.

Further, analysis of IP's response to ICC Staff Data Request CCSI 1.12 indicates: (a) there is diversity on a daily basis between the different customers on SC 76, (b) there has not been any daily imbalance problems in the last two years, and (c) daily imbalances for most SC 76 customers as a group are above the proposed 10% first tier for daily imbalances less than 49% of the time, and above the 25% second tier less than 11% of the time. My analysis indicates that over the calendar years

2002 and 2003, the annual imbalance percentage for SC 76 customers as a group was –5.5% and –5.9%, respectively, and –5.7% for the two years combined. Also, the analysis indicates that on a monthly basis for the two years, the SC 76 customers as a group were only above 10% at the end of the month, in only 5 of the 24 months. Thus, diversity of the customers mitigates system problems and costs alleged to be due to individual customer daily imbalances. See IIEC Exhibit 1, Schedule 1 for a summary of the percentages noted above.

Since daily balancing provisions are not required, there is no need for the daily cashouts proposed by IP.

**Q WHAT ARGUMENTS DOES IP MAKE TO SUPPORT THE NEED FOR DAILY  
BALANCING AND CASHOUT PROVISIONS?**

A In response to IIEC's Data Request 1.27, IP states daily balancing and cashouts are necessary to provide transportation customers with an incentive to match their deliveries to IP's system with their use. IP identifies four reasons why daily imbalance cashouts provide such an incentive: (1) transporting customers could freely use IP's system as an arbitrage opportunity by counting on IP gas purchases when the market is relatively high and delivering gas to the system when the market is relatively low causing IP's PGA costs to be higher; (2) transporting customers could rely on IP's gas supply on days when pipeline capacity or reserved gas supply are otherwise fully used; (3) when transporting customer's deliveries to IP's gas system and use do not match, the difference implies use of storage; and (4) imbalance costs are a feature of transportation service from interstate pipelines and IP attempts to place the cost on the cost-causers. I disagree with IP's reasoning.



1    **Q     PLEASE EXPLAIN WHY YOU DISAGREE.**

2    A     IP's rationale for implementing daily balancing and daily cashout provisions appears  
3           to center on the issue of a mismatch between deliveries and use which could result in  
4           use of storage, IP's gas supply, or IP's pipeline capacity. IP ignores the fact that  
5           transportation customers are already required to balance on a monthly basis, which  
6           requires them to manage supplies on a daily basis to end the month in balance.  
7           Transportation customers can be out of balance on a daily basis for some days of the  
8           month, in either a positive or negative direction, but must adjust their nominations  
9           during the month to be in balance at the end of the month to avoid expensive monthly  
10          cashouts of imbalances.

11           IP also ignores that transportation customers have their own gas supply and  
12          interstate transportation, and therefore do not need to utilize IP's gas supply or  
13          capacity. IP accepts transportation customers' nominations on the interstate pipeline  
14          as deliveries to its system so any imbalances are on the IP system and not on the  
15          interstate pipeline. The result is that transportation customers do not have  
16          imbalances on the interstate pipeline. Thus, transportation customers do not use IP's  
17          interstate pipeline capacity.

18           Also, because transportation customers have their own gas supply and IP  
19          accepts it from the interstate pipeline as the customers' nominations, they do not use  
20          IP's gas supply.

21           Therefore, the only remaining issue is whether transportation customers use  
22          IP's gas storage and, if so, how such storage costs should be allocated to  
23          transportation customers. IP argues that storage is used and that daily balancing and  
24          daily cashout of imbalances properly allocates storage costs to transportation  
25          customers for their suggested use of storage.

1   **Q     IN ITS RESPONSE TO IIEC DATA REQUEST 1.27, IP NOTES THAT SC 76**  
2       **CUSTOMERS ARE ALLOCATED NO STORAGE COSTS, SO IN THE ABSENCE**  
3       **OF IMBALANCE CASHOUTS OR FEES THAT THE REMAINING CUSTOMERS**  
4       **WHO ARE ALLOCATED STORAGE COSTS SUBSIDIZE SC 76 CUSTOMERS. DO**  
5       **YOU AGREE WITH IP'S REASONING?**

6   **A     No, I do not. The question is whether the daily cashout approach properly aligns**  
7       natural gas storage service and storage costs, and if this is the proper way to allocate  
8       storage costs to transportation customers assuming they use storage for balancing.  
9       The answer is no. The IP approach would actually require SC 76 customers to  
10      subsidize other customers for the reasons stated below.

11           IP's daily cashout proposal would cause transportation customers to lose  
12      much of the benefit of the monthly tolerance band and cause transportation  
13      customers to be charged in different (higher) cashout blocks than if the present  
14      cashout is continued. For example, a customer with the same nominations each day  
15      of the month, having a positive imbalance of 12% on 15 days of a month and a  
16      negative imbalance of 12% on the other 15 days, would not have any imbalance at all  
17      under the present monthly cashout. Under the daily cashout, however, that customer  
18      would be cashed out in the 10% to 25% block for each day of the month. This would  
19      result in a severe penalty.

20           For example, my analysis of the SC 76 transportation data provided in  
21      response to ICC Staff Data Request CCSI 1.12 indicates that it would cost customers  
22      approximately \$6 million more per year based on daily cashout than what  
23      transportation customers would pay under the current monthly cashout tariff. (See  
24      IIEC Exhibit 1, Schedule 2) This is a significant amount and is about \$0.0341 per

1 therm (Ccf) or 34.1¢ per Mcf<sup>2</sup> of additional cost for each therm of transportation  
2 throughput based on the average for both years. This is significantly more than what  
3 transportation customers would have to pay if a storage bank was available, as  
4 valued by Dr. Rosenberg in his companion testimony. This results in a subsidy of IP's  
5 other customers by the SC 76 customers and overcharges SC 76 customers for the  
6 use of storage.

7 **Q WOULD SUCH CUSTOMERS ESCAPE ALL IMBALANCE CHARGES UNDER THE**  
8 **PRESENT MONTHLY CASHOUT?**

9 A No. That customer would pay for daily imbalances on every day of the month as a  
10 net imbalance amount that would be priced on a monthly cashout price and not on  
11 daily prices. However, it would not be forced to pay for gas that it has not used or sell  
12 gas that it has not left on the system. Monthly cashouts have worked in the past and  
13 will continue to work in the future to control system imbalances and costs.

14 **Q WHAT OTHER SERVICES SHOULD IP PROVIDE TO HELP TRANSPORTATION**  
15 **CUSTOMERS DEAL WITH IMBALANCES?**

16 A IP should provide pooling of transportation volumes to allow transportation customers  
17 to take advantage of the natural diversity that exists on the system. In addition,  
18 imbalance trading should be allowed before any cashouts occur. If offsetting  
19 imbalances exist, there is no net harm to the system. Transportation customers  
20 should be allowed to participate in a pool with other similarly situated customers to  
21 take advantage of customer diversity and to lower monthly imbalance costs. An  
22 example of such a pooling service is Central Illinois Public Service's Rider G, Group

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<sup>2</sup> Total Charge Difference for 2002 & 2003 from Schedule 2 (\$11,472,099) divided by  
Nominations for 2002 & 2003 from Schedule 1 (336,605,651 Therms) = \$0.0341 per Therm.

1 Balancing Transportation Service tariff. In addition, if for any reason the monthly  
2 cashouts currently in IP's tariff are not removed as proposed by IP, IP should allow its  
3 transportation customers to trade their imbalances such that they could net out some  
4 or all of their imbalances against the offsetting imbalances of another customer.  
5 Such a trading mechanism would be voluntary, but would provide an effective means  
6 of reconciling at least a portion of the system imbalances

7 **Q PLEASE EXPLAIN WHAT SHOULD BE DONE TO DEAL WITH DAILY**  
8 **IMBALANCES AND CASHOUTS, IF THE COMMISSION DENIES YOUR**  
9 **ARGUMENT TO REJECT BOTH.**

10 **A** At a minimum, SC 76 transportation customers should be allowed to use IP's storage  
11 for balancing purposes instead of being subject to cashout of daily imbalances. Dr.  
12 Rosenberg in his companion testimony is proposing a cost-based optional unbundled  
13 balancing service and has determined the appropriate rate for such an optional  
14 balancing service or storage bank. Under his proposal, any SC 76 customer, who  
15 elects a BMQ, could use the storage service to balance daily swings up to the level  
16 allowed by the storage bank. An SC 76 customer who elects not to utilize the  
17 optional storage service would be subject to daily balancing and daily cashouts of  
18 imbalances.

19 This would be an optional service that SC 76 customers could subscribe to if  
20 they so desire and if they believe they need such additional help to maintain their gas  
21 balances. This storage bank would be similar to the bank provided to transportation  
22 customers who utilize Rider OT service. Those customers that select this banking  
23 service would be allocated storage costs only for the balancing function (see IP  
24 Exhibit 8.1, page 5, lines 91-108), just as are residential and commercial customers,  
25 and SC 65/Rider OT transportation customers. This would provide benefit to

1 transportation customers and support for balancing, and some limited supply hedging  
2 and peaking benefits similar to those bundled sales customers receive. Therefore,  
3 providing a storage bank to transportation customers provides benefit to those  
4 customers who elect to pay storage costs.

5 **Q ARE THERE OTHER CHANGES THAT ARE NECESSARY IF THE COMMISSION**  
6 **ALLOWS IP'S IMBALANCE PROPOSALS?**

7 A Yes. If daily balancing and cashout requirements are adopted by the Commission,  
8 the daily balancing tiers need to be enlarged and the daily cashout penalties must be  
9 changed. The daily balancing tiers need to be changed from 0-10%, 10-25%, and  
10 greater than 25% to 0-20%, 20-40%, and greater than 40%. The daily cashout  
11 penalty percentages also need to be changed from 90% and 110% to 95% and 105%  
12 for the second tier cashouts and changed from 75% and 125% to 80% and 120% for  
13 the third tier cashouts. This needs to be done to reduce the cost of daily imbalance  
14 cashouts so that the imbalances that get cashed out and are not eliminated by use of  
15 a storage bank do not over-recover storage costs and result in SC 76 customers  
16 subsidizing other customers. I discussed this subsidy on page 9, line 20 to page 10,  
17 line 6.

1    **Q     PLEASE EXPLAIN WHY REAL-TIME METER INFORMATION IS NEEDED BY**  
2    **TRANSPORTATION CUSTOMERS.**

3    A     Timely and accurate metering information is essential for at least two reasons. First,  
4           such information is an essential prerequisite for imposing balancing provisions. That  
5           is, customers cannot reasonably respond to those provisions if they cannot determine  
6           how much gas is being delivered on a real-time basis. Second, IP and its customers  
7           need access to that information to efficiently operate, whether in the context of  
8           operational difficulties on the system or just for routine operations.

9    **Q     IS REAL-TIME METER INFORMATION AVAILABLE ON THE IP SYSTEM?**

10   A     I understand that although IP has installed telemetering equipment for most of its  
11           industrial customers, the metering information is not readily available to the customer  
12           on a real-time basis and only available during the current day if the customer reads  
13           the meter several times during the day. If a transportation customer has only one  
14           meter this may not be too much of a problem, but if the customer has multiple meters  
15           and multiple locations there is no way that the customer can monitor all the meters on  
16           a timely basis and make the necessary adjustment in its flows to stay in balance on a  
17           daily basis. Also, in some cases, the customer's gas marketer handles nominations.  
18           The customer would have to provide information on flows several times per day to the  
19           marketer who would then have to make adjustments in the intraday nominations to  
20           attempt to keep the customer in a daily balance. (See ICC Staff Data Request, CCSI  
21           2.01) This is particularly difficult to understand given that IP requires its industrial  
22           customers to pay for the installation of the telemetering equipment through a monthly  
23           charge and IP owns, maintains and operates most meters.

1    **Q     PLEASE EXPLAIN THE IMPACT THAT NOT HAVING REAL-TIME METER**  
2    **INFORMATION HAS ON IP'S DAILY BALANCING PROPOSAL.**

3    A     As explained above, while IP claims in response to ICC Staff Data Request, CCSI  
4         2.01 that it can provide daily meter information to its customers, it does not claim it  
5         can provide real-time meter information. Without real-time information, it is  
6         impractical for the customers to obtain the information throughout the day and adjust  
7         their nominations so that daily balances are maintained. The nominations cannot be  
8         adjusted during the day because the customers do not know their volumes during the  
9         day and because of that do not know what changes to make to try to balance.

10        The Commission should reject any daily balancing, daily cashout, and similar  
11        provisions as it is impossible to comply with these requirements, and monthly  
12        balancing and cashout are sufficient to control imbalances. If the Commission does  
13        not reject these daily provisions, at a minimum, the Commission should reject these  
14        provisions until IP can provide timely and readily available usage information. To  
15        illustrate, it would be unfair and unreasonable to implement daily balancing provisions  
16        when IP's customers cannot obtain usage information in a manner that allows them to  
17        react to daily imbalances. That is because the customers, through no fault of their  
18        own, would be unable to adjust their usage in order to avoid penalties. To the extent  
19        that balancing and penalty provisions are intended to incent customer behavior, no  
20        such incentive would be provided.

21        Additionally, customers need the information to run efficiently. They need  
22        information so that they can match receipts and takes and thereby manage their gas  
23        usage. Industrial customers cannot just guess based on level of plant operation;  
24        usage varies based on a number of factors. The Commission should not implement  
25        daily balancing under any circumstance. However, if the Commission does impose

daily balancing, it should not do so without requiring IP to provide real time information to SC 76 customers on their daily usage.

**Unaccounted-for-Gas Adjustment Issues**

**Q WHAT OTHER CHANGES ARE NECESSARY TO IP'S RATES AND TARIFFS TO MAKE THEM JUST AND REASONABLE?**

A Changes to IP's Unaccounted-for-Gas (UFG) adjustment charge or the method of calculating that charge are necessary.

**Q HOW HAS IP DETERMINED THE PRESENT UNACCOUNTED-FOR-GAS CHARGE?**

A The current UFG charge or Factor U for IP was determined based on volumes for the 12 months ended June 2003. The UFG percentage for IP is 2.581% and the UFG gross up percentage is 1.02581.

**Q DO YOU BELIEVE THAT IP'S UFG CHARGES ARE APPROPRIATE?**

A No, I do not. To put the current 2.6% charge in perspective, based on a gas commodity price of \$6.00 per MMBtu, it would cost the customer about \$0.156 per MMBtu. This is very large in comparison to the current SC 76 large customer rate on a 100% load factor basis at about \$0.07 per Mcf for high pressure customers and \$0.14 per Mcf for low pressure customers.

The excessive nature of these charges is evident when compared to IP's experience in recent years. Historically, from 1994 to 2003, the charges varied from 1.2% to 2.6% for the IP system (see IIEC Exhibit 1, Schedule 3). The charge needs to be redetermined so that it is more reasonable and reflects more accurately the



1 future fuel and losses for the system. In addition, in the most recent three years, UFG  
2 percentages for IP were posted that have been much smaller than the current  
3 percentage, as shown on Schedule 3. IP should explain or justify the increase from  
4 its historical level.

5 **Q WHAT CHANGES ARE YOU PROPOSING TO IP'S UNACCOUNTED-FOR-GAS**  
6 **ADJUSTMENT CHARGE?**

7 A IP's current UFG Adjustment charge should be reduced from its current level of about  
8 2.6% to 2.2%. The reason for this reduction is that the current charge is too high and  
9 not supported by IP's historic gas losses. The 2.2% is a 3 year average of losses  
10 based on data obtained from the Federal Department of Transportation (DOT)  
11 website about the history of the losses.<sup>3</sup>

12 **Q HOW DO YOU RECOMMEND THAT IP DETERMINE THE UFG CHARGE?**

13 A Instead of basing the current UFG (or the 2005 factor) on the year ended June 2003  
14 (or June 2004), the current UFG charge for IP should be determined based on the  
15 most recent three-year average of UFG percentages. For example, the current factor  
16 should be based on the average for the years 2001-2003 (see IIEC Exhibit 1,  
17 Schedule 3). That approach would normalize the UFG charge. The three-year  
18 average shows that the UFG level claimed by IP for the 12 months ending June 2003  
19 does not reflect normal UFG experience. Had the level for the 12-month period been  
20 reasonably in line with recent experience, it would be the appropriate level to use.  
21 The IP UFG percentage should be 2.2% for 2004.

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<sup>3</sup> The losses reported by IP to the DOT are different from those used as the Factor U or UFG Adjustment charge. This calls into question what the proper loss factor is (see IIEC Exhibit 1, Schedule 3).

**The Need to Reflect the Heat Content of Gas**

**Q HOW DOES IP DEFINE AND USE THE TERM “THERM?”**

A IP neither uses the traditional definition of the term “therm” nor applies it in the normal manner. IP’s definition of therm is not heat-related or Btu based but is a volumetric measure. IP takes gas into its system from interstate pipeline at its city gate on an MMBtu basis and then adjusts that for the pipeline Btu value (i.e., by 1.025 to account for Btu value) to produce a volume of gas on an Mcf basis. Then, IP adjusts that Mcf volume for the Unaccounted-for-Gas factor of 2.6% (1.026). The end result is that the gas a transportation customer delivers or nominates to IP is a reduced volume that is in Mcfs (or Ccfs) and is not a “therm.” For example, if IP takes 100 MMBtus into its system from the interstate pipeline, it then changes that into 97.56 Mcfs or 9.756 Ccfs ( $100/1.025$  or  $100/1.025/10$ ). This Mcf volume is adjusted for Unaccounted-for-Gas and the resulting volume delivered to the customer is 95.09 Mcf or 9.509 Ccf ( $97.56/1.026$  or  $97.56/1.026/10$ ). The reduced volume delivered to the customer is in Mcfs or Ccfs and is not in Btus or therms.

Deliveries to the customers are metered in Mcfs or Ccfs and the heat content of the gas is not taken into account. So, on the IP system, the volumes nominated by and actual use of the transportation customer are in comparable units, Ccfs, but not “therms.” For determining imbalances, this is fine. However, when cashouts are done, imbalances are cashed out at a Chicago City Gate price that is in MMBtus. There is a mismatch in applying an MMBtu price to a Mcf volume. This is not correct.

1    **Q     WHY IS THIS AN ISSUE OF CONCERN FOR IIEC COMPANIES AND OTHER**  
2    **TRANSPORTATION CUSTOMERS?**

3    A     The definition of an Mcf or Ccf as a therm leaves the impression that IP is billing and  
4           accounting for gas on a heat-content basis. Since they are not, there is a resulting  
5           mismatch between the volumes delivered in MMBtus by the interstate pipelines and  
6           sold to transportation customers by gas marketers, and the volumes in Mcfs or Ccfs  
7           recorded by IP. One problem with this is that IP proposed to cashout daily imbalance  
8           volumes in Mcfs at a Chicago City Gate price, which is in dollars per MMBtus. This  
9           results in a mismatch of volumes and prices and a pricing of apples at orange's  
10          prices. This has a dollar impact on transportation customers. The difference is equal  
11          to the Btu factor and can be in the range of 2% to 2.5%.

12   **Q     WHAT DO YOU RECOMMEND BE DONE TO CORRECT THIS SITUATION?**

13   A     IP should be required to either convert to an actual therm billing and gas accounting  
14          basis so the gas heat content is reflected, or if the current system is retained, then the  
15          imbalance cashout volumes should be converted to MMBtus before the cashout price  
16          is applied. Alternatively, the Chicago City Gate price could be converted from an  
17          MMBtu price to an Mcf price based on some relevant monthly Btu and that price be  
18          applied to the imbalances. In either case, an average monthly Btu is required for all  
19          gas delivered. The alternative method is more complicated and therefore not as  
20          attractive a solution to the problem as the first method.

21   **Q     DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

22   A     Yes, it does.

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**Qualifications of John W. Mallinckrodt**

1    **Q     PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2    A     John W. Mallinckrodt. My business mailing address is 723 Gardner Road,  
3           Flossmoor, IL 60422.

4    **Q     WHAT IS YOUR OCCUPATION?**

5    A     I am a consultant in the field of public utility regulation and am employed by Brubaker  
6           & Associates, Inc., energy, economic and regulatory consultants.

7    **Q     PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

8    A     I hold a Bachelor's degree in Engineering from the University of Missouri, and a  
9           Master of Business Administration degree from the University of Chicago.

10           From 1969 through 1989, I was employed by Natural Gas Pipeline Company  
11           of America (NGPL), a subsidiary of MidCon Corporation. At NGPL, the positions I  
12           held included Assistant Vice President of Engineering and Assistant Vice President of  
13           Planning. My responsibilities as AVP of Engineering included system design, storage  
14           reservoir engineering, code compliance and environmental matters. As AVP of  
15           Planning, I was responsible for strategic and business planning for the Company.  
16           During my years with MidCon/Peoples Energy, I also worked for The Peoples Gas  
17           Light and Coke Company as Field Superintendent of Distribution and Administrative  
18           Assistant to the President. I also have experience in pipeline design, construction  
19           and operations.

1 In 1989, I was employed by K&W Design/Construction as General Manager of  
2 Engineering and Construction. I directed the engineering, design and construction of  
3 projects for major food, pharmaceutical and petrochemical client companies.

4 I joined the firm of Drazen-Brubaker & Associates, Inc. (DBA) in June of 1991.  
5 In April 1995 the firm of Brubaker & Associates, Inc. was formed. It includes most of  
6 the former DBA principals and staff. Since 1991, I have been engaged in the  
7 preparation of studies relating to utility rate matters and have participated in interstate  
8 pipeline, intrastate pipeline, oil pipeline, gas distribution and electric rate cases.

9 In addition to our main office in St. Louis, the firm also has branch offices in  
10 Phoenix, Arizona; Chicago, Illinois; Corpus Christi, Texas; and Plano, Texas.

11 **Q HAVE YOU PREVIOUSLY APPEARED BEFORE A REGULATORY COMMISSION**  
12 **OR A PUBLIC AUTHORITY?**

13 A I have submitted testimony and appeared before the Federal Energy Regulatory  
14 Commission, the Delaware Public Service Commission, the Georgia Public Service  
15 Commission, the Iowa Utilities Board, the Public Utility Commission of Texas, the  
16 Railroad Commission of Texas, and the Public Service Commission of Wisconsin. In  
17 addition, I have submitted testimony in cases before the Colorado Public Utilities  
18 Commission, the Illinois Commerce Commission, the Louisiana Public Service  
19 Commission, the Missouri Public Service Commission and the New York State Public  
20 Service Commission. I have also appeared before the United States District Court for  
21 the District of Wyoming.

22 **Q ARE YOU A REGISTERED PROFESSIONAL ENGINEER?**

23 A I am a registered professional engineer in the State of Illinois.